**Comparison of agents for the treatment of CHB**

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| --- | --- | --- | --- | --- | --- | --- |
| **Feature** | **Interferon** | **Lamivudine (Epivir-HBV®):** | **Adefovir (Hepsera®)** | **Entecavir (Baraclude®)** | **Telbivudine (Tyzeka®)** | **Tenofovir (Viread)** |
| ***MOA*** | Endogenous cytokine that induces the immune system to exert antiviral activity  **Immuno-modulator** | Nucleoside analog  Reverse transcriptase inhibitor | Acyclic nucleotide analog  Reverse transcriptase inhibitor | Guanosine nucleoside analog  Reverse transcriptase inhibitor  30 x > potent than lamivudine | Nucleoside analog  Reverse transcriptase inhibitor  Higher antiviral potency than lamivudine | Nucelotide analog  Reverse transcriptase inhibitor  Higher antiviral potency than adefovir |
| ***Dose*** |  |  |  |  |  |  |
| ***Route*** | SQ | Oral | Oral | Oral | Oral | Oral |
| ***Duration of therapy*** | Finite (12 months) | Indefinite (yrs to life) | Indefinite  (yrs to life) | Indefinite  (yrs to life) | Indefinite  (yrs to life) | Indefinite (yrs to life) |
| **Feature** | **Interferon** | **Lamivudine (Epivir-HBV®)** | **Adefovir (Hepsera®)** | **Entecavir (Baraclude®)** | **Telbivudine (Tyzeka®)** | **Tenofovir (Viread)** |
| ***Side-effects*** | Flu-like syndrome Fever, chills, myalgias  ↓ WBC, ↓ Plts  Depression, suicidal ideation | N/V, HA, fatigue, rash, peripheral neuropathy | Nephrotoxicity, lactic acidosis | HA, GI upset | Myopathy, peripheral neuropathy | GI upset, |
| ***Monitor*** | Weekly CBC during first 2 weeks then monthly  LFTs at baseline and every 3-6 months during therapy | Renal dose adjustments | Renal dose adjustments | Minimal | Minimal | Renal dose adjustments |
| ***Viral resistance*** | None | 15-30% @ 1 year  70% @ 5 years | None @ 1 year  Approx 30%@ 3 years | Low | High? | Unknown |
| ***Cost*** | High | Low | Intermediate | Intermediate | Intermediate | Intermediate |
| ***Place in therapy*** | Finite treatment duration, no resistance  Low tolerability  Not recommended in decompensated disease | Third line  Low cost, low side-effect profile  Moderate potency  High rate of resistance | Second line  Least potent  Slowest to suppress HBV DNA levels  Most likely to result in primary nonresponse | First line  High potency, low resistance  Firs line in most protocols | Second line  Place in therapy unknown  High potency,  High resistance? | First line  High potency,  Likely to replace adefovir in therapy |

\*\*\*Optimum treatment duration with the oral agents is unknown\*\*\*\*\*